

Appl. No. : 08/943,511
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knowledge about oxygen saturation in body tissue and upon the approximation of arterial oxygen saturation.[.]

E1
§ 51. (Amended) A physiological monitor comprising an input configured to receive at least two measured intensity signals generated by the detection of at least two wavelengths of light transmitted through body tissue, said intensity signals each having a portion indicative of at least one physiological parameter;

E2
a Kalman filter responsive to said intensity signals, said Kalman filter attenuating selected frequencies present in said physiological signal, said frequencies comprising substantially motion noise in said physiological signals; and

a processor responsive to the output of said Kalman filter to derive a physiological parameter based upon said output of said Kalman filter, wherein said processor further determines said physiological parameter based upon knowledge about the physiological parameter and possible variation over time.

E3
1053. (Amended) The physiological monitor of Claim 51, wherein said physiological parameter[s] comprises heart rate.

E4
1362. (Amended) A method of determining oxygen saturation, said method comprising the steps of:

receiving an input of at least two measured intensity signals generated by the detection of at least two wavelengths of light transmitted through body tissues, said intensity signals each having a portion substantially dependent on the attenuation of said light due to arterial blood and a portion substantially dependent upon attenuation due to [venous blood] during motion of the body tissue;

adaptively filtering said intensity signals;

[C]calculating oxygen saturation during motion based upon the result of said filtering.

E5
1665. (Amended) [The pulse oximeter of Claim 39,] A pulse oximeter comprising:
an input configured to receive at least two measured intensity signals generated by the detection of at least two wavelengths of light transmitted through body tissue having flowing blood, said intensity signals each having a first portion substantially dependent upon attenuation of said light due to arterial blood, and during motion, a second portion

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substantially dependent upon the attenuation of said light due to motion induced noise;
and

a processor responsive to the at least two intensity signals to determine an
approximation of arterial oxygen saturation in the presence of motion induced noise,
wherein the processor comprises a Kalman filter.

REMARKS

The Examiner rejected Claims 39-44, 51-55 and 62-71 under 35 U.S.C. § 112. Additionally, the Examiner rejected Claims 39-41 and 66-70 under 35 U.S.C. §102(b) as being anticipated by Frick et al. Claims 45-47 and 72-78 were allowed.

Rejection under 35 U.S.C. § 112

The Examiner rejected claims 39-44, 51-55 and 62-71 under 35 U.S.C. §112, Second Paragraph. Applicants have deleted, without waiving any rights, Claims 39-41 and 66-70.

As stated by the Examiner, Claims 42-44, 51-55, 62-65 and 71 would be allowable if amended to overcome the rejections under 35 U.S.C. 112, Second Paragraph. Applicants have amended these Claims in line with the Examiner's suggestions to distinctly claim the subject matter of the invention. With regard to Claim 65, it has been rewritten as an independent claim to include all the limitations of the base claim which is no longer pending, and to overcome the §112 rejection. Applicants respectfully submit that amended Claims 42-44, 51-55, 62-65 and 71 are now allowable.

Rejection under 35 U.S.C. §102(b)

The Examiner rejected Claims 39-41 and 66-70 under 35 U.S.C. §102(b) as being anticipated by Frick et al. Applicants have deleted Claims 39-41 and 66-70, without waiving any rights, including, but not limited to, the right to challenge Frick et al. as anticipatory art to the application. Furthermore, Applicants expressly reserve the right to challenge Robinson et al. as prior art to this application.

Allowed Claims

The Examiner stated that Claims 45-47 and 72-78 are allowed.

In view of the foregoing amendments and remarks, all claims are believed to be in condition for allowance. If any issues remain to be resolved, the Examiner is cordially invited to contact the undersigned such that any issues may be promptly resolved.